

FEDERAL ITEM IDENTIFICATION GUIDE

LIGHT-SWITCH

This Reprint replaces FIIG A159, dated October 5, 2007.



Commander
Defense Logistics Information Service
ATTN: DLIS-K
74 Washington Avenue North, Suite 7
Battle Creek, Michigan 49037-3084
(COMM) (269) 961-5779
(DSN) 661-5779

This Federal Item Identification Guide for Supply Cataloging is issued under the authority of Department of Defense Instruction 5025.7.

The use of this publication is mandatory for US. Federal Activities participating in Federal Catalog System Operations.

BY ORDER OF THE DIRECTOR

/s/

Commander

Defense Logistics Information Service

Table of Contents

GENERAL INFORMATION	1
Index of Master Requirement Codes	5
INDEX OF APPROVED ITEM NAMES COVERED BY THIS FIIG	6
APPLICABILITY KEY INDEX	7
SECTION I	9
SECTION III.....	26
Reply Tables	33
Reference Drawing Groups.....	40
Technical Data Tables.....	46
FIIG Change List	57

GENERAL INFORMATION

1. Purpose and Scope

This Federal Item Identification Guide (FIIG) is a self-contained document for the collection, coding, transmittal, and retrieval of item characteristics and related supply management data for an item of supply for logistical use. This FIIG is to be used to describe items of supply identified by the index of approved item names appearing in this section.

2. Contents

This FIIG is comprised of the following:

- Index of Approved Item Names Covered by this FIIG
- Applicability Key Index
- Section I - Item Characteristics Data Requirements
- Section III - New text that should be here.
- Appendix A - Reply Tables
- Appendix B - Reference Drawing Groups (as applicable)
- Appendix C - Technical Data Tables (as applicable)

a. Index of Approved Item Names Covered by this FIIG:

The index lists the approved item names with definitions and item name codes as they appear in Cataloging Handbook H6, applicable to this FIIG. In addition, each name entry is assigned an applicability key for use in relating the characteristics requirements in Section I to the specific item name.

b. Applicability Key Index:

The purpose of this index is to provide the user with a ready reference for determining the specific requirements which are applicable to a given approved item name. This index lists all requirements in sequence as they appear in the FIIG. The applicability of a Master Requirement Coded requirement is indicated by the column headed by the specific item name applicability key as follows:

(1) The letter "X" indicates the requirement must be answered for a full descriptive item.

(2) The letters "AR" indicate the requirement is to be answered as required by (1) instructional notes within the FIIG; (2) when the reply is predicated on replies to a related main requirement; or (3) when an asterisk (*) is used in conjunction with the applicability key column in Section I.

(3) A blank in the column indicates the requirement is not applicable to the specific item name.

c. Section I - Item Characteristics Data Requirements:

This section contains the physical and performance characteristics requirements needed to describe and identify an item of supply. These characteristics differentiate one item from all other items of supply and are to be used to meet the needs of all supported functions. This section is arranged in columns. Identification of each column and instructions pertinent thereto are as follows:

(1) Applicability Key:

The first column shows the applicability key(s) for each requirement. It indicates whether the requirement need be satisfied for the item being identified. "ALL" indicates that the requirement must be answered for all items covered by the FIIG. One or more alphabetic character(s) or group of one or more alphabetic characters indicates a response is required when describing items with an approved item name or names represented by the key(s). An asterisk (*) used in conjunction with any applicability key indicates that the characteristic stated in the requirement may not be applicable to all items covered by the FIIG.

(2) Master Requirement Codes (MRC):

A four-position code which is assigned to a FIIG requirement for identification of the requirement, cross-referencing requirements in the various sections and appendices of the FIIG, and for mechanized processing and retrieval of FIIG generated data. Absence of a MRC for a requirement indicates a lead-in to requirements with individual MRCs in Appendix B.

(a) The coding technique for providing MULTIPLE/OPTIONAL responses will not be used for a Section I requirement assigned Mode Code A or L that leads to Appendix B sketches with dimensional requirements.

(b) Identified Secondary Address Coding:

This technique is for extending the Master Requirement Code so that a unique address is provided for each application of the requirement in relation to the item and is authorized only as instructed within the requirement. Responses coded through this technique will always consist of the following: (1) Master Requirement Codes, (2) indicator code (a single numeric character determined by the number of positions contained), (3) identified secondary address code (1 to 3-digit alphabetic codes determined by the number of predicted replies), (4) the mode code, (5) the reply code and/or clear text response, and (6) end with a record separator (*). Steps (1) through (6) are repeated for each application of the requirement.

(c) AND/OR coding:

A technique for extending the Master Requirement Code to provide a distinctive address for multiple responses to the same requirement. Responses coded through this technique will always consist of (1) Master Requirement Code, (2) mode code, (3) the response or reply code (as instructed by the requirement), (4) a single dollar sign (\$) for an OR condition, or a double dollar sign (\$\$) for an AND condition, (5) the mode code, (6) the response or reply code

FIIG A159
GENERAL INFORMATION

(followed by conditions (4) through (6) for each of the multiple responses) and (7) end with a record separator (*). NOTE: Apply this technique only when instructed by the requirement sample reply (e.g.).

(3) Mode Code:

A one-position alphabetic code that specifies the manner in which a response will be prepared. Each requirement assigned a MRC is also assigned a mode code. Sample replies follow each FIIG requirement displaying the proper construction of a response for the assigned mode code. The response to a requirement will always be prepared in accordance with the assigned mode code and sample reply except in the following instances:

(a) Use of E Mode Code replies is not authorized. If a reply needed to describe an item is not listed in the applicable table, contact the FIIG Initiator.

(b) Mode Code K may not be used for any requirement unless instructed by the requirement instructions.

(4) Requirement:

This portion includes the characteristics data elements and data use identifiers required to identify and differentiate one item of supply from another, narrative definitions, and explanations as to use and method of expression. Instructions for coding and preparing replies are also provided.

(5) Reply Code:

A code that represents an established authorized reply to a requirement.

d. Section III - Supplementary Technical and Supply Management Data:

This section includes those characteristics requirements necessary to support specific logistics functions other than National Stock Number assignment.

e. Appendix A - Reply Tables:

Tables of authorized replies to requirements and reply codes when the tables are too lengthy for inclusion in Section I/III, when applicable.

f. Appendix B - Reference Drawings:

This appendix contains representative illustrations which portray specific variations of one or more generic characteristics. If reference drawings contain requirements pages to be used in conjunction with illustrations for dimensioning purposes, the requirements pages will contain Master Requirement Codes, mode codes, and a statement of the requirement. A response to requirements on a requirements page is necessary only for those Master Requirement Codes applicable to the illustration selected.

g. Appendix C - Technical Data Tables:

FIIG A159
GENERAL INFORMATION

This appendix contains conversion charts and similar data pertinent to the requirements in Section I/III, when applicable.

3. Enter administrative MRC CLQL immediately following the last FIIG requirement reply, as instructed below:

<u>MRC</u>	<u>Mode</u> <u>Code</u>	<u>Requirement</u>	<u>Example</u>
CLQL	G	COLLOQUIAL NAME (common usage name by which an item is known)	CLQLGWOVEN WIRE CLOTH*

4. Special Instructions and Indicator Definitions

a. Measurements:

Unless otherwise indicated within a requirement example, enter all measurements in decimal form, carried to the nearest three decimal places, with a minimum of one digit preceding the decimal. For SI (metric), enter all measurements with a minimum of one digit before and after the decimal. For fraction to decimal conversion, see Appendix C.

b. Indicators:

A cross hatch (#) following an AIN, MRC, Reply Code or Drawing Number indicates for "ALL EXCEPT USA" use only.

5. Indexes

a. Index of Data Requirements

This index is arranged in alphabetic sequence by Master Requirement Code, cross-referenced to the applicable data requirement and page number(s).

b. Index of Approved Item Names

This index is arranged in alphabetic sequence referenced to Applicability Key.

c. Applicability Key Index

This index is arranged in Applicability Key Sequence.

6. Maintenance

Requests for revisions and other changes will be directed to:

FIIG A159
GENERAL INFORMATION
SECTION I/III REQUIREMENTS INDEX

Index of Master Requirement Codes

NAME.....	10
ARQK.....	10
AEUJ.....	10
AEWU	11
CBBL.....	11
AEXD	12
MARK	12
AKDY.....	12
AEEA.....	12
AZCS	13
APHA.....	13
AFUZ.....	14
ABFF	14
AZCQ.....	14
ANNQ.....	15
ANNR.....	15
AXGY.....	16
AKPV.....	16
AWAZ	16
ABTB.....	17
ABKQ.....	17
ABKR	18
ADAV	18
ABKW	19
ABHP.....	19
ABMK	20
ABFE.....	20
FEAT	21
TEST.....	21
SPCL.....	22
ZZZK	22
ZZZT.....	23
ZZZW	24
ZZZX.....	24
ZZZY.....	24
CRTL	25
PRPY	25
ELRN.....	25
NHCF.....	26
ELCD.....	26
CXCY	27

FIIG A159
GENERAL INFORMATION
SECTION I/III REQUIREMENTS INDEX

BBRJ	27
AFJM	27
BBRG	28
AFJQ	28
AGAV	29
AFJK	29
PRMT	30
PMWT	30
PMLC	31
SUPP	31
ZZZP	31
ZZZV	32
HZRD	32

FIIG A159
GENERAL INFORMATION
INDEX OF APPROVED ITEM NAMES COVERED BY THIS FIIG

INDEX OF APPROVED ITEM NAMES COVERED BY THIS FIIG

<u>Approved Item Name</u>	<u>INC</u>	<u>App Key</u>
LIGHT-SWITCH	13166	A

An electrical device consisting of a Switch (1) and a light, not intended for illumination but present for the purpose of indication, on a common mounting, separable and capable of functioning individually; or one light and one switch fabricated as a common inseparable body incapable of functioning individually. It may include wall plate or box cover and it may be complete with a box. Excludes push, pull, push-pull, and toggle switches with a lamp mounted integrally in the actuator.

FIIG A159
GENERAL INFORMATION
APPLICABILITY KEY INDEX

APPLICABILITY KEY INDEX

A

NAME	X
ARQK	X
AEUJ	AR
AEWU	AR
CBBL	AR
AEXD	AR
MARK	AR
AKDY	X
AEEA	X
AZCS	X
APHA	X
AFUZ	AR
ABFF	AR
AZCQ	AR
ANNQ	AR
ANNR	AR
AXGY	AR
AKPV	AR
AWAZ	AR
ABTB	AR
ABKQ	AR
ABKR	AR
ADAV	AR
ABKW	AR
ABHP	AR
ABMK	AR
ABFE	AR
FEAT	AR
TEST	AR
SPCL	AR
ZZZK	AR
ZZZT	AR
ZZZW	AR
ZZZX	AR
ZZZY	AR
CRTL	AR
PRPY	AR
ELRN	AR
NHCF	AR
ELCD	AR
CXCY	AR
BBRJ	AR
AFJM	AR
BBRG	AR
AFJQ	AR
AGAV	AR
AFJK	AR
PRMT	AR

FIG A159
GENERAL INFORMATION
APPLICABILITY KEY INDEX

PMWT	AR
PMLC	AR
SUPP	AR
ZZZP	AR
ZZZV	AR
HZRD	AR

SECTION I

APP Key	MRC	Mode Code	Requirements
------------	-----	--------------	--------------

ALL

NAME	D	ITEM NAME
------	---	-----------

Definition: A NOUN, WITH OR WITHOUT MODIFIERS, BY WHICH AN ITEM OF SUPPLY IS KNOWN.

Reply Instructions: Enter the applicable Item Name Code from the index appearing in the General Information Section. (e.g., NAMED13166*)

ALL

ARQK	J	LAMP VOLTAGE RATING IN VOLTS
------	---	------------------------------

Definition: THE TOTAL ELECTRICAL VOLTAGE OF THE LAMP, EXPRESSED IN VOLTS.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., ARQKJA6.0*; ARQKJB6.0\$\$JC8.0*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., ARQKKN*)

<u>REPLY CODE</u>	<u>REPLY (AC20)</u>
A	NOMINAL
B	MINIMUM
C	MAXIMUM

ALL*

AEUJ	D	LAMP BASE TYPE ACCOMMODATED
------	---	-----------------------------

Definition: INDICATES THE TYPE OF LAMP BASE THE ITEM WILL ACCOMMODATE.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AEUJDCA*; AEUJDCD\$DCM*)

<u>REPLY CODE</u>	<u>REPLY (AD36)</u>
AF	CANDELABRA SCREW

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
		AP	DOUBLE CONTACT BAYONET CANDELABRA
		BV	MEDIUM SCREW
		CA	MIDGET FLANGED
		CB	MIDGET GROOVED
		CC	MIDGET SCREW
		CD	MINIATURE BAYONET
		CL	MINIATURE PINLESS
		CM	MINIATURE SCREW
		CN	MINIATURE TWO PIN
		EW	WEDGE

ALL*

AEWU A LAMP BULB SIZE DESIGNATOR

Definition: THE DESIGNATION THAT DESCRIBED THE SIZE AND CONFIGURATION OF A LAMP BULB.

Reply Instructions: Enter the applicable size designation.

(e.g., AEWUAT1-3/4*)

If the source data identifies the lamp by number only (i.e., 327 lamp), see Appendix C, Table 1 under "Lamp Bulb Outline".

NOTE FOR MRC CBBL AND FEAT: E MODE REPLIES WILL NOT BE ACCEPTED IN REPLY TO MRC CBBL. IF A REPLY IS NOT REFLECTED ON THE TABLE FOR MRC CBBL, ENTER THE FEATURE IN REPLY TO MRC FEAT.

ALL* (See Note Above)

CBBL D FEATURES PROVIDED

Definition: THOSE FEATURES, NOT OTHERWISE SPECIFIED, WHICH MAY BE REQUIRED FOR PROPER FUNCTIONING OF THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., CBBLDAABQ*)

For multiple replies, use AND coding (\$\$) entering in Reply Code sequence. (e.g., CBBLDAABQ\$\$DAABR*)

REPLY CODE
AABQ
AABR

REPLY (AN47)
LAMP
LENS

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
------------	-----	--------------	--------------

ALL*

AEXD D LENS COLOR

Definition: THE HUE OR TINT OF THE LENS.

Reply Instructions: Enter the applicable Reply Code from [Appendix A](#), Table 1. (e.g., AEXDDRE0000*; AEXDDRE0000\$DGR0000*)

ALL*

MARK G SPECIAL MARKINGS

Definition: MARKINGS INCLUDED ON AN ITEM FOR THE PURPOSE OF OFFERING INSTRUCTIONS OR WARNINGS OR TO INDICATE THE PURPOSE, FUNCTION, OR APPLICATION OF THE ITEM. EXCLUDES MANUFACTURERS PART NUMBERS, SYMBOLS, OR THE LIKE.

Reply Instructions: Enter the reply in clear text. (e.g., MARKGHIGH VOLTAGE*)

ALL

AKDY J SWITCH CONTACT ARRANGEMENT

Definition: THE DESIGNATION THAT IDENTIFIES THE SCHEMATIC DIAGRAM OF THE ELECTRICAL CONFIGURATION OF A SWITCH INCLUDING THE NUMBER OF SWITCHING POLES OR FORMS.

Reply Instructions: Enter the applicable Reply Code from [Appendix B](#), Reference Drawing Group A, followed by the number of poles. (e.g., AKDYJAA2*)

ALL

AEEA D SWITCH TYPE

Definition: INDICATES THE TYPE OF SWITCH INCLUDED IN THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AEEADAB*; AEEADAG\$DAB*)

REPLY CODE
AA
AB
AC

REPLY (AC82)
PULL
PUSH
PUSH-PULL

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
		HH	PUSH-PUSH
		AD	ROTARY
		AF	SLIDE
		AG	TOGGLE

ALL

AZCS J CURRENT TYPE AND RATING IN AMPERES

Definition: INDICATES THE TYPE AND AMOUNT OF ELECTRICAL FLOW AT WHICH THE ITEM IS DESIGNED TO OPERATE, EXPRESSED IN AMPERES.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZCSJBA1.00*; AZCSJBB1.50\$JBC2.00*)

Table 1

REPLY CODE

B

C

REPLY (AB62)

AC

DC

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL

APHA J OPERATING VOLTAGE IN VOLTS

Definition: THE AMOUNT OF OPERATING VOLTAGE, EXPRESSED IN VOLTS

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., APHAJA28.0*; APHAJB110.0\$JC120.0*)

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL*

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
AFUZ	D		ACTUATOR TIP LUMINESCENT METHOD

Definition: THE MEANS BY WHICH THE END OF THE ACTUATOR IS CAUSED TO GLOW IN THE ABSENCE OF VISIBLE LIGHT AND WITHOUT BENEFIT OF ANY APPLIED ELECTRICAL POWER.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AFUZDAAC*; AFUZDAAC\$DAAB*)

REPLY CODE

AAB

AAC

REPLY (AB54)

FLUORESCENT

PHOSPHORESCENT

ALL*

ABFF D FURNISHED ITEMS

Definition: ITEMS FURNISHED AS ACCESSORIES WHICH ARE NOT SPECIFIED ELSEWHERE.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., ABFFDLL*)

For multiple replies, use AND coding (\$\$) entering in reply table sequence. (e.g., ABFFDLK\$\$DAP*)

REPLY CODE

LK

AP

LL

REPLY (AB28)

BOX

COVER

WALL PLATE

ALL*

AZCQ H SHAPE AND LOCATION

Definition: THE PHYSICAL CONFIGURATION AND ITS LOCATION ON THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below. (e.g., AZCQHASLAYG*; AZCQHAHLAYG\$\$HAHLAGW*; AZCQHAHLAYG\$HANDAYG*)

Table 1

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
		<u>REPLY CODE</u>	<u>REPLY (AD07)</u>
		AHL	HEXAGONAL
		AND	RECTANGULAR
		APL	ROUND
		ASL	SQUARE
		<u>Table 2</u>	
		<u>REPLY CODE</u>	<u>REPLY (AJ91)</u>
		AYG	BOX
		AGW	COVER
		AYJ	PLATE

ALL*

ANNQ H MATERIAL AND LOCATION

Definition: THE ELEMENT, COMPOUND, OR MIXTURE OF WHICH THE ITEM IS FABRICATED, EXCLUDING ANY SURFACE TREATMENT, AND ITS LOCATION.

Reply Instructions: Enter the applicable Reply Code from Appendix A, Table 2, followed by the applicable Reply Code from the table below. (e.g., ANNQHALC000AGW; ANNQHALC000AGW\$\$HAL0000AGW*; ANNQHALC000AYG\$HAL0000AYG*)*

<u>REPLY CODE</u>	<u>REPLY (AJ91)</u>
AYG	BOX
AGW	COVER
AYJ	PLATE

ALL*

ANNR H SURFACE TREATMENT AND LOCATION

Definition: THE PLATING, DIP, AND/OR COATING THAT CANNOT BE WIPED OFF. PLATING AND/OR COATING IS ANY CHEMICAL AND/OR METALLIC ADDITIVE, ELECTROCHEMICAL, OR MILD MECHANICAL PROCESS WHICH PROTECTS THE SURFACE OF THE ITEM, AND ITS LOCATION.

FIIG A159
SECTION I

APP		Mode	
Key	MRC	Code	Requirements

Reply Instructions: Enter the applicable Reply Code from [Appendix A](#), Table 3, followed by the applicable Reply Code from the table below. (e.g., ANNRHAN0000AYG; ANNRHCNA000AGW\$HCDR000AGW*; ANNRHAN0000AYG\$HZNA000AYG*)*

REPLY CODE

AYG
AGW
AYJ

REPLY (AJ91)

BOX
COVER
PLATE

ALL*

AXGY D MOUNTING METHOD

Definition: THE MEANS OF ATTACHING THE ITEM.

Reply Instructions: Enter the applicable Reply Code from [Appendix A](#), Table 5. (e.g., AXGYDAHF*; AXGYDABC\$DAEE*)

ALL*

AKPV A MOUNTING FACILITY QUANTITY

Definition: THE NUMBER OF MOUNTING FACILITIES PROVIDED.

Reply Instructions: Enter the quantity. (e.g., AKPVA2*)

NOTE FOR MRC AWAZ: REPLY TO THIS MRC IF REPLY CODE AET, AFA, OR AHF IS ENTERED FOR MRC AXGY.

ALL* (See Note Above)

AWAZ J MOUNTING FACILITY THREAD SIZE

Definition: THE THREAD SERIES, THREAD MAJOR/MAXIMUM DIAMETER, AND THE NUMBER OF THREADS PER MEASUREMENT SCALE OF THE MOUNTING FACILITY.

FIIG A159
SECTION I

APP		Mode	
Key	MRC	Code	Requirements

Reply Instructions: Enter the applicable Reply Code from [Appendix A](#), Table 4, followed by the thread diameter and the number of threads per specific measurement scale.

(e.g., AWAZJNC1/4-20*;
AWAZJNF10-32*)

NOTE FOR MRC ABTB: IF REPLY CODE ACQ IS ENTERED FOR MRC AXGY, REPLY TO MRC ABTB.

ALL* (See Note Above)

ABTB J MOUNTING HOLE DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A MOUNTING HOLE, AND TERMINATES AT THE HOLE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABTBJAA1.000*; ABTBJLA25.4*; ABTBJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A
L

REPLY (AA05)

INCHES
MILLIMETERS

Table 2

REPLY CODE

A
B
C

REPLY (AC20)

NOMINAL
MINIMUM
MAXIMUM

ALL*

ABKQ J CENTER TO CENTER DISTANCE BETWEEN
MOUNTING FACILITIES PARALLEL TO LENGTH

Definition: THE DISTANCE BETWEEN THE CENTER OF ONE MOUNTING FACILITY AND THE CENTER OF THE ADJACENT MOUNTING FACILITY PARALLEL TO THE LENGTH.

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
------------	-----	--------------	--------------

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABKQJAA1.000*; ABKQJLA25.4*; ABKQJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A
L

REPLY (AA05)

INCHES
MILLIMETERS

Table 2

REPLY CODE

A
B
C

REPLY (AC20)

NOMINAL
MINIMUM
MAXIMUM

ALL*

ABKR	J	CENTER TO CENTER DISTANCE BETWEEN MOUNTING FACILITIES PARALLEL TO WIDTH
------	---	--

Definition: THE DISTANCE BETWEEN THE CENTER OF ONE MOUNTING FACILITY AND THE CENTER OF THE ADJACENT MOUNTING FACILITY PARALLEL TO THE WIDTH.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABKRJAA1.000*; ABKRJLA25.4*; ABKRJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A
L

REPLY (AA05)

INCHES
MILLIMETERS

Table 2

REPLY CODE

A
B
C

REPLY (AC20)

NOMINAL
MINIMUM
MAXIMUM

ALL*

ADAV	J	OVERALL DIAMETER
------	---	------------------

FIIG A159
SECTION I

APP	Mode	
Key	MRC	Code Requirements

Definition: A MEASUREMENT OF THE LONGEST STRAIGHT LINE ACROSS A CIRCULAR CROSS-SECTIONAL PLANE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ADAVJAA1.000*; ADAVJLA25.4*; ADAVJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL*

ABKW J OVERALL HEIGHT

Definition: THE DISTANCE MEASURED IN A STRAIGHT LINE FROM THE BOTTOM TO THE TOP OF AN ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABKWJAA1.000*; ABKWJLA25.4*; ABKWJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL*

ABHP J OVERALL LENGTH

FIIG A159
SECTION I

APP		Mode	
Key	MRC	Code	Requirements

Definition: THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABHPJAA1.000*; ABHPJLA25.4*; ABHPJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL*

ABMK J OVERALL WIDTH

Definition: AN OVERALL MEASUREMENT TAKEN AT RIGHT ANGLES TO THE LENGTH OF AN ITEM, IN DISTINCTION FROM THICKNESS.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABMKJAA1.000*; ABMKJLA25.4*; ABMKJAB2.495\$\$JAC2.503*)

Table 1

REPLY CODE

A

L

REPLY (AA05)

INCHES

MILLIMETERS

Table 2

REPLY CODE

A

B

C

REPLY (AC20)

NOMINAL

MINIMUM

MAXIMUM

ALL*

ABFE D HAZARDOUS LOCATION/ENVIRONMENTAL

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
PROTECTION			
<p>Definition: THE SPECIFIC COMMERCIAL RATING WHICH CLASSES THE ITEM AS TO WHAT DEGREE THE ITEM WILL WITHSTAND ENVIRONMENTAL ELEMENTS AND/OR HAZARDOUS LOCATIONS.</p> <p>Reply Instructions: Enter the applicable Reply Code from Appendix A, Table 7. (e.g., ABFEDAR*)</p> <p>For multiple ratings, use AND coding (\$\$), entering in reply tablesequence. (e.g., ABFEDAC\$\$DAE*)</p>			
ALL * (See Note Preceding MRC CBBL)			
FEAT	G		SPECIAL FEATURES
<p>Definition: THOSE UNUSUAL OR UNIQUE CHARACTERISTICS OR QUALITIES OF AN ITEM NOT COVERED IN THE OTHER REQUIREMENTS AND WHICH ARE DETERMINED TO BE ESSENTIAL FOR IDENTIFICATION.</p> <p>Reply Instructions: Enter the reply in clear text. Separate multiple replies with a semicolon. (e.g., FEATGADJUSTABLE NOSE CLIP*; FEATGADJUSTABLE NOSE PIECE; DISPOSABLE*)</p>			
ALL*			
TEST	J		TEST DATA DOCUMENT
<p>Definition: THE SPECIFICATION, STANDARD, DRAWING, OR SIMILAR INSTRUMENT THAT SPECIFIES ENVIRONMENTAL AND PERFORMANCE REQUIREMENTS OR TEST CONDITIONS UNDER WHICH AN ITEM IS TESTED AND ESTABLISHES ACCEPTABLE LIMITS WITHIN WHICH THE ITEM MUST CONFORM IDENTIFIED BY AN ALPHABETIC AND/OR NUMERIC REFERENCE NUMBER. INCLUDES THE COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE OF THE ENTITY CONTROLLING THE INSTRUMENT.</p> <p>Reply Instructions: Enter the applicable Reply Code from the table below, followed by the 5-position CAGE Code, a dash, and the document identification number.</p> <p>(e.g., TESTJA12345-CWX654321*;</p> <p>TESTJA1234A-654321\$\$JB5556A-663654*;</p> <p>TESTJAA2345-654321\$JB55566-663654*)</p>			

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
			<u>REPLY</u> <u>CODE</u>
			<u>REPLY (AC28)</u>
		A	SPECIFICATION (Includes engineering type bulletins, brochures, etc., that reflect specification type data in specification format; excludes commercial catalogs, industry directories, and similar trade publications, reflecting general type data on certain environmental and performance requirements and test conditions that are shown as "typical," "average," "nominal," etc.)
		B	STANDARD (Includes industry or association standards, individual manufacturer standards, etc.)
		C	DRAWING (This is the basic governing drawing, such as a contractor drawing, original equipment manufacturer drawing, etc.; excludes any specification, standard, or other document that may be referenced in a basic governing drawing)

ALL*

SPCL G SPECIAL TEST FEATURES

Definition: TEST CONDITIONS AND RATINGS, OR ENVIRONMENTAL AND PERFORMANCE REQUIREMENTS THAT ARE DIFFERENT, MORE CRITICAL, OR MORE SPECIFIC THAN THOSE SPECIFIED IN A GOVERNING TEST DATA DOCUMENT.

Reply Instructions: Enter the reply in clear text. (e.g., SPCLGSELECTED AND TESTED FOR NAVIGATIONAL SYSTEMS*)

ALL*

ZZZK J SPECIFICATION/STANDARD DATA

Definition: THE DOCUMENT DESIGNATOR OF THE SPECIFICATION OR STANDARD WHICH ESTABLISHED THE ITEM OF SUPPLY.

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
------------	-----	--------------	--------------

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the Commercial and Government Entity (CAGE) Code of the entity controlling the document, a dash, and the document designator. The agency that controls the limited coordination document must be preceded and followed by a slash following the designator. The word canceled or superseded must be preceded and followed by a slash for the designator. Professional and industrial association specifications/standards are differentiated from a manufacturer's specification in that the data has been coordinated and published by the professional and industrial association. Include amendments and revisions where applicable.

(e.g., ZZZKJT81337-30642B*;

ZZZKJS81349-MIL-D-180 REV1/CANCELED/*;

ZZZKJP80205-NAS1103*;

ZZZKJS81349-MIL-C-1140C/CE/*;

ZZZKJT81337-30642B\$\$JP80205-NAS1103*)

<u>REPLY</u> <u>CODE</u>	<u>REPLY (AN62)</u>
S	GOVERNMENT SPECIFICATION
T	GOVERNMENT STANDARD
D	MANUFACTURERS SOURCE CONTROL
R	MANUFACTURERS SPECIFICATION
N	MANUFACTURERS SPECIFICATION CONTROL
M	MANUFACTURERS STANDARD
B	NATIONAL STD/SPEC
A	PROFESSIONAL/INDUSTRIAL ASSOCIATION SPECIFICATION
P	PROFESSIONAL/INDUSTRIAL ASSOCIATION STANDARD

NOTE FOR MRC ZZZT: IF THE SPECIFICIATION/STANDARD CITED IN REPLY TO MRC ZZZK IS NONDEFINITIVE, REPLY TO MRC ZZZT. THIS REPLY IS THE DATA WHICH IS NOT RECORDED IN SEGMENT C.

ALL* (See Note Above)

ZZZT	J	NONDEFINITIVE SPEC/STD DATA
------	---	-----------------------------

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
<p>Definition: THE NUMBER, LETTER, OR SYMBOL THAT INDICATES THE TYPE, STYLE, GRADE, CLASS, AND THE LIKE, OF AN ITEM IN A NONIDENTIFYING SPECIFICATION OR STANDARD.</p> <p>Reply Instructions: Enter the applicable Reply Code from Appendix A, Table 6, followed by the appropriate number, letter, or symbol.(e.g., ZZZTJTY1*; ZZZTJTY1\$JSTA*; ZZZTJTY1\$JSTA*)</p>			
ALL*			
	ZZZW	G	DEPARTURE FROM CITED DOCUMENT
<p>Definition: THE TECHNICAL DIFFERENTIATING CHARACTERISTIC(S) OF AN ITEM OF SUPPLY WHICH DEPART(S) FROM THE TEXT OF A SPECIFICATION OR A STANDARD IN THAT IT REPRESENTS A SELECTION OF CHARACTERISTICS STATED IN THE SPECIFICATION OR STANDARD AS BEING OPTIONAL, OR A VARIATION FROM ONE OR MORE OF THE STATED CHARACTERISTICS, OR AN ADDITIONAL CHARACTERISTIC NOT STATED IN THE SPECIFICATION OR STANDARD.</p> <p>Reply Instructions: Enter the reply in clear text. (e.g., ZZZWGAS MODIFIED BY MATERIAL*)</p>			
ALL*			
	ZZZX	G	DEPARTURE FROM CITED DESIGNATOR
<p>Definition: THE VARIATION WHEN THE ITEM IS IN CONFORMITY WITH A TYPE DESIGNATOR COVERED BY A SPECIFICATION OR STANDARD, EXCEPT IN REGARD TO ONE OR MORE TECHNICAL DIFFERENTIATING CHARACTERISTICS.</p> <p>Reply Instructions: Enter the reply in clear text. (e.g., ZZZXGAS MODIFIED BY MATERIAL*)</p>			
ALL*			
	ZZZY	G	REFERENCE NUMBER DIFFERENTIATING CHARACTERISTICS
<p>Definition: A FEATURE OF THE ITEM OF SUPPLY WHICH MUST BE SPECIFICALLY RECORDED WHEN THE REFERENCE NUMBER COVERS A RANGE OF ITEMS.</p>			

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
------------	-----	--------------	--------------

Reply Instructions: Enter the reply in clear text. (e.g., ZZZYGCOLOR CODED LEADS*; ZZZYGAS DIFFERENTIATED BY MATERIAL*)

ALL*

CRTL	A	CRITICALITY CODE JUSTIFICATION
------	---	--------------------------------

Definition: THE MASTER REQUIREMENT CODES OF THOSE REQUIREMENTS WHICH ARE TECHNICALLY CRITICAL BY REASON OF TOLERANCE, FIT, PERFORMANCE, OR OTHER CHARACTERISTICS WHICH AFFECT IDENTIFICATION OF THE ITEM.

Reply Instructions: Enter the Master Requirement Code for the requirement, the reply to which renders the item as being critical. (e.g., CRTLAMATL*; CRTLAMATL\$\$ASURF*)

Reply to this requirement only if the header record for the item identification for the item being identified has been coded as critical.

NOTE FOR MRC PRPY: IF DOCUMENT AVAILABILITY CODE B, D, F, OR H, REPLY TO MRC PRPY.

ALL* (See Note Above)

PRPY	A	PROPRIETARY CHARACTERISTICS
------	---	-----------------------------

Definition: IDENTIFICATION OF THOSE CHARACTERISTICS INCLUDED IN THE DESCRIPTION FOR WHICH A NON-GOVERNMENT ACTIVITY HAS IDENTIFIED ALL OR SELECTED CHARACTERISTICS OF THE ITEM AS BEING PROPRIETARY AND THEREFORE RESTRICTED FROM RELEASE OUTSIDE THE GOVERNMENT WITHOUT PRIOR PERMISSION OF THE ORIGINATOR OF THE DATA.

Reply Instructions: Enter the MRC codes of the individual characteristics of the description which are marked proprietary on the technical data, using AND coding (\$\$) for multiple characteristics. If all the MRCs are proprietary, enter the reply PACS. If none of the MRCs is proprietary, enter the reply NPAC. (e.g., PRPYAPACS*; PRPYANPAC*; PRPYAMATL\$\$ASURF*)

ALL*

ELRN	G	EXTRA LONG REFERENCE NUMBER
------	---	-----------------------------

Definition: A REFERENCE NUMBER EXCEEDING 32 POSITIONS.

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
<p>Reply Instructions: Enter the entire reference number. Do not include the 5-position Commercial and Government Entity (CAGE) Code unless there is more than one extra long reference number on the NSN, (e.g., ELRNGANN112036BIL060557LEN313605UZ62365*).</p> <p>If there is more than one extra long reference number on the NSN, include the CAGE or NCAGE and separate each reference by using the "&" character, (e.g., 28480 ANN112036BIL060557LEN313605UZ62365 & S1234 NN112036BIL060557LEN313605UZ62365).</p> <p>In determining quantity of characters in the reference number, count will be made after modification in accordance with Volume 2, Chapter 9, FLIS Procedures Manual, DoD 4100.39-M.</p>			

NOTE FOR MRC NHCF: IF THE CRITICALITY CODE IS E, H, OR M, REPLY TO MRC NHCF.

ALL* (See Note Above)

NHCF D NUCLEAR HARDNESS CRITICAL FEATURE

Definition: AN INDICATION OF THE NUCLEAR HARDNESS CRITICALITY OF THE ITEM.

Reply Instructions: Enter the Reply Code from the table below. (e.g., NHCFCY*)

REPLY CODE
CY

REPLY (AD05)
HARDENED

ALL*

ELCD D EXTRA LONG CHARACTERISTIC DESCRIPTION

Definition: A DESCRIPTION THAT EXCEEDS 5000 CHARACTERS.

Reply Instructions: Enter the Reply Code from the table below. (e.g., ELCDDA*)

REPLY CODE
A

REPLY (AN58)
ADDITIONAL DESCRIPTIVE DATA ON MANUAL RECORD

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
ALL*			
	CXCY	G	PART NAME ASSIGNED BY CONTROLLING AGENCY
Definition: THE NAME ASSIGNED TO THE ITEM BY THE GOVERNMENT AGENCY OR COMMERCIAL ORGANIZATION CONTROLLING THE DESIGN OF THE ITEM			
Reply Instructions: Enter the reply in clear text. (e.g., CXCYGLINE PROCESSOR CONTROL BOARD*)			

SECTION III

APP Key	MRC	Mode Code	Requirements
ALL			
	BBRJ	D	SPECIAL HANDLING FEATURE
Definition: THE UNUSUAL OR UNIQUE CHARACTERISTIC(S) OR QUALITY(IES) OF AN ITEM WHICH NECESSITATES THE ESTABLISHMENT OF A REQUIREMENT FOR SPECIAL HANDLING.			
Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., BBRJDAH*; BBRJDAL\$\$DAM*)			
		<u>REPLY CODE</u>	<u>REPLY (AM83)</u>
		AL	HUMIDITY CONTROLLED
		AH	RADIOACTIVE
		AM	SHOCK PROTECTED

ALL			
	AFJM	D	INSPECTION FREQUENCY
Definition: THE SPECIFIED TIME INTERVAL NECESSARY TO DETECT MATERIAL DETERIORATION THAT WILL AFFECT STOCK READINESS.			

FIIG A159
SECTION I

APP
Key MRC Mode Code Requirements

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AFJMDAB*)

<u>REPLY CODE</u>	<u>REPLY (AD38)</u>
AB	ONE YEAR FROM RECEIPT AND EVERY YEAR THEREAFTER
AH	THREE YEARS FROM RECEIPT AND EVERY THREE YEARS THEREAFTER
AF	TWO YEARS FROM RECEIPT AND EVERY FOUR YEARS THEREAFTER
AE	TWO YEARS FROM RECEIPT AND EVERY THREE YEARS THEREAFTER
AD	TWO YEARS FROM RECEIPT AND EVERY TWO YEARS THEREAFTER
AC	TWO YEARS FROM RECEIPT AND EVERY YEAR THEREAFTER

ALL

BBRG D STORAGE TYPE

Definition: INDICATES THE TYPE OF STORAGE SPACE REQUIRED FOR AN ITEM IN ORDER TO PROVIDE THE DEGREE OF PROTECTION NECESSARY TO MAINTAIN SERVICEABILITY STANDARDS.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., BBRGDAN*; BBRGDAE\$DAN*)

<u>REPLY CODE</u>	<u>REPLY (AM81)</u>
AC	CLOSED SHED
AD	CONTROLLED HUMIDITY WAREHOUSE
AM	DEHUMIDIFIED WAREHOUSE
AE	GENERAL PURPOSE WAREHOUSE
AN	HEATED WAREHOUSE
AH	OPEN SHED
AJ	UNHEATED WAREHOUSE

ALL

AFJQ J STORAGE TEMP RANGE

FIIG A159
SECTION I

APP

Key MRC Mode Code Requirements

Definition: THE MINIMUM AND MAXIMUM TEMPERATURE AT WHICH AN ITEM CAN BE STORED WITHOUT DETRIMENTAL EFFECT.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric values separated by a slash. Precede negative values with an M and positive values with a P. (e.g., AFJQJFM32.0/P50.0*)

REPLY CODE

C
F

REPLY (AB36)

DEG CELSIUS
DEG FAHRENHEIT

NOTE FOR MRC AGAV: REPLY TO THIS MRC ONLY WHEN THE ITEM OF SUPPLY BEING IDENTIFIED IS "SPECIALLY DESIGNED" (PECULIAR).

ALL (See Note Above)

AGAV G END ITEM IDENTIFICATION

Definition: THE NATIONAL STOCK NUMBER OR THE IDENTIFICATION INFORMATION OF THE END EQUIPMENT FOR WHICH THE ITEM IS A PART.

Reply Instructions: Enter the reply in clear text.

(e.g., AGAVG3930-00-000-0000*;

AGAVGFORKLIFT TRUCK, SMITH CORPORATION, MODEL 12, TYPE A*)

ALL

AFJK J CUBIC MEASURE

Definition: A MEASUREMENT OF VOLUME TAKEN BY MULTIPLYING THE LENGTH BY THE WIDTH BY THE HEIGHT OF AN ITEM AND RENDERED IN CUBIC UNITS.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AFJKJB2.0*; AFJKJC5.0*)

REPLY CODE

C
D
F
B
E

REPLY (AD42)

CUBIC CENTIMETERS
CUBIC DECIMETERS
CUBIC FEET
CUBIC INCHES
CUBIC METERS

FIIG A159
SECTION I

APP Key	MRC	Mode Code	Requirements
------------	-----	-----------	--------------

ALL

PRMT	D	PRECIOUS MATERIAL
------	---	-------------------

Definition: IDENTIFICATION OF THE PRECIOUS MATERIAL CONTAINED IN THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., PRMTDAGA000*; PRMTDAUA000\$\$DAGA000*; PRMTDAGA000\$DAUA000*)

<u>REPLY CODE</u>	<u>REPLY (MA01)</u>
AUA000	GOLD
IRA000	IRIDIUM
AZA000	OSMIUM
PDA000	PALLADIUM
PTA000	PLATINUM
RHA000	RHODIUM
RTA000	RUTHENIUM
AGA000	SILVER

ALL

PMWT	J	PRECIOUS MATERIAL AND WEIGHT
------	---	------------------------------

Definition: AN INDICATION OF THE PRECIOUS MATERIAL CONTAINED IN THE ITEM, AND THE AMOUNT PER A MEASUREMENT SCALE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. Enter multiple replies in Table 1 sequence. (e.g., PMWTJPTA000R0.780*; PMWTJAUA000F0.500\$\$JAGA000R0.780*; PMWTJAGA000F0.500\$JAUA000R0.780*)

<u>Table 1</u>	
<u>REPLY CODE</u>	<u>REPLY (MA01)</u>
AUA000	GOLD
IRA000	IRIDIUM
AZA000	OSMIUM
PDA000	PALLADIUM
PTA000	PLATINUM
RHA000	RHODIUM
RTA000	RUTHENIUM
AGA000	SILVER

FIIG A159
SECTION I

APP

Key	MRC	Mode Code	Requirements
-----	-----	-----------	--------------

Table 2

REPLY CODE

REPLY (AG14)

C	CARAT
E	GRAINS, TROY
R	GRAMS
F	OUNCES, TROY

ALL

PMLC	J	PRECIOUS MATERIAL AND LOCATION
------	---	--------------------------------

Definition: AN INDICATION OF THE PRECIOUS MATERIAL AND ITS LOCATION IN THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the location in clear text. (e.g., PMLCJAUA000TERMINALS*; PMLCJAUA000TERMINALS\$\$JAGA000INTERNAL SURFACES*; PMLCJAGA000INTERNAL SURFACES\$JAUG000TERMINALS*)

REPLY CODE

REPLY (MA01)

AUA000	GOLD
IRA000	IRIDIUM
AZA000	OSMIUM
PDA000	PALLADIUM
PTA000	PLATINUM
RHA000	RHODIUM
RTA000	RUTHENIUM
AGA000	SILVER

ALL

SUPP	G	SUPPLEMENTARY FEATURES
------	---	------------------------

Definition: CHARACTERISTICS OR QUALITIES OF AN ITEM NOT COVERED IN ANY OTHER REQUIREMENT, WHICH ARE CONSIDERED ESSENTIAL INFORMATION FOR ONE OR MORE FUNCTIONS EXCLUDING NSN ASSIGNMENT.

Reply Instructions: Enter the reply in clear text. (e.g., SUPPGMAY INCL HOLE IN UPPER SUPPORT FOR MTG DURING SHIPMENT*)

ALL

ZZZP	J	PURCHASE DESCRIPTION IDENTIFICATION
------	---	-------------------------------------

FIIG A159
SECTION I

APP			
Key	MRC	Mode Code	Requirements

Definition: THE CONTROLLING ACTIVITY AND IDENTIFICATION OF A DOCUMENT USED IN LIEU OF A SPECIFICATION IN THE PROCUREMENT OF AN ITEM OF SUPPLY.

Reply Instructions: Enter the 5-position Commercial and Government Entity (CAGE) Code, followed by a dash and the identifying number of the document.

(e.g., ZZZPJ81A37-30624A*)

ALL

ZZZV	G	FSC APPLICATION DATA
------	---	----------------------

Definition: THE JUSTIFICATION FOR THE ASSIGNMENT OF A FEDERAL SUPPLY CLASS (FSC) TO AN ITEM BASED ON THE CLASSIFICATION OF THE NEXT HIGHER CLASSIFIABLE ASSEMBLY.

Reply Instructions: Enter the name of the next higher classifiable assembly in clear text. (e.g., ZZZVGFUEL SYSTEM, GASOLINE ENGINE, NONAIRCRAFT*)

ALL

HZRD	D	HAZARDOUS SUBSTANCES
------	---	----------------------

Definition: THE SUBSTANCES AND/OR MATERIALS CONTAINED IN THE ITEM THAT HAVE BEEN IDENTIFIED AS HAZARDOUS OR ENVIRONMENTALLY DAMAGING BY THE ENVIRONMENTAL PROTECTION AGENCY OR OTHER AUTHORIZED GOVERNMENT AGENCY.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., HZRDDHAZ008*; HZRDDHAZ012\$\$DHAZ030*)

REPLY CODE

HAZ008
HAZ012
HAZ030
HAZ052

REPLY (HZ00)

CADMIUM
COPPER
MAGNESIUM ALLOY
ZINC

FIG A159
SECTION I

Reply Tables

Table 1 - LENS COLORS	35
Table 2 - MATERIALS	35
Table 3 - SURFACE TREATMENTS.....	36
Table 4 - THREAD SERIES	36
Table 5 - MOUNTING METHODS.....	37
Table 6 - NONDEFINITIVE SPEC/STD DATA.....	37
Table 7 - HAZARDOUS LOCATIONS/ENVIRONMENTAL PROTECTION	39

Table 1 - LENS COLORS

<u>REPLY CODE</u>	<u>REPLY (AD06)</u>
AM0000	AMBER
BL0000	BLACK
BU0000	BLUE
CL0000	CLEAR
GR0000	GREEN
VY0000	IVORY
RG0000	ORANGE
PU0000	PURPLE
RE0000	RED
VL0000	VIOLET
WH0000	WHITE
YE0000	YELLOW

Table 2 - MATERIALS

<u>REPLY CODE</u>	<u>REPLY (AD09)</u>
ALC000	ALUMINIUM
AL0000	ALUMINIUM ALLOY
BC0000	BERYLLIUM COPPER
BR0000	BRASS
BN0000	BRONZE
CD0000	CADMIUM
CU0000	COPPER
CK0000	COPPER ALLOY
FG0000	FIBERGLASS
GS0000	GLASS
FE0000	IRON
MGA000	MAGNESIUM ALLOY
MED000	METAL, NONFERROUS
NC0000	NICKEL COPPER ALLOY (Monel)
PC0000	PLASTIC
PCAG00	PLASTIC, POLYSTYRENE
RC0000	RUBBER
AGD000	SILVER ALLOY
AG0000	SILVER (coin silver)
ST0000	STEEL
STB000	STEEL, CORROSION RESISTING
TU0000	TELLURIUM-COPPER
ZN0000	ZINC
ZNL000	ZINC ALLOY

Table 3 - SURFACE TREATMENTS

<u>REPLY CODE</u>	<u>REPLY (AD09)</u>
AN0000	ANODIZED
ZZW000	BLACK MATTE
CDR000	CADMIUM PLATED
CN0000	CHROMATE (Iridite)
CRA000	CHROMIUM PLATED
EN0000	ENAMEL
ENF000	ENAMEL, BLACK
AUG000	GOLD PLATED
NR0000	NATURAL
NFG000	NICKEL PLATED
XXC000	OXIDE, RED
PNC000	PAINT, CHROMIUM, PASSIVATED
PN0000	PAINTED
PDB000	PALLADIUM FLASHED
PDA000	PALLADIUM PLATED
PS0000	PASSIVATED
PS0272	PASSIVATED, MIL-STD-171, FINISH 5.4.1
PHD000	PHOSPHATE DIP (ALODINE)
DA0000	RESIN
RHC000	RHODIUM FLASHED
RHA000	RHODIUM PLATED
AGE000	SILVER PLATED
AGF000	SILVER PLATED WITH RHODIUM FLASH
NA0000	SODIUM DICHROMATE
SNF000	TIN PLATED
ZNA000	ZINC CHROMATE
ZNN000	ZINC PLATED

Table 4 - THREAD SERIES

<u>REPLY CODE</u>	<u>REPLY (AH06)</u>
SM	ISO M
SS	ISO S
NP	NPT
UN	UN
NC	UNC
NE	UNEF
NF	UNF
NJ	UNJ
JC	UNJC
JE	UNJEF
JF	UNJF
NM	UNM

<u>REPLY CODE</u>	<u>REPLY (AH06)</u>
NS	UNS

Table 5 - MOUNTING METHODS

<u>REPLY CODE</u>	<u>REPLY (AM39)</u>
ABB	BASE
ABC	BRACKET
AFL	CLIP
AEY	FOOT
AED	PANEL
AEE	PLATE
AEZ	PRINTED CIRCUIT
ABY	SLOT
ANF	SPRING CLIP
ACC	TAB
AFA	THREADED BUSHING
AHF	THREADED HOLE
AET	THREADED STUD
ACQ	UNTHREADED HOLE

Table 6 - NONDEFINITIVE SPEC/STD DATA

<u>REPLY CODE</u>	<u>REPLY (AD08)</u>
AL	ALLOY
AN	ANNEX
AP	APPENDIX
AC	APPLICABILITY CLASS
AR	ARRANGEMENT
AS	ASSEMBLY
AB	ASSORTMENT
BX	BOX
CY	CAPACITY
CA	CASE
CT	CATEGORY
CL	CLASS
CE	CODE
CR	COLOR
CC	COMBINATION CODE
CN	COMPONENT
CP	COMPOSITION
CM	COMPOUND
CD	CONDITION
CS	CONSTRUCTION
DE	DESIGN

FIIG A159
APPENDIX A

<u>REPLY CODE</u>	<u>REPLY (AD08)</u>
DG	DESIGNATOR
DW	DRAWING NUMBER
EG	EDGE
EN	END
FY	FAMILY
FG	FIGURE
FN	FINISH
FM	FORM
FA	FORMULA
GR	GRADE
GP	GROUP
BA	IMAGE COLOR
NS	INSERT
TM	ITEM
KD	KIND
KT	KIT
LG	LENGTH
LT	LIMIT
MK	MARK
AA	MARKER
ML	MATERIAL
BB	MAXIMUM DENSITY
MH	MESH
ME	METHOD
BC	MINIMUM DENSITY
MD	MODEL
MT	MOUNTING
NR	NUMBER
PT	PART
PN	PATTERN
PC	PHYSICAL CONDITION
PS	PIECE
PL	PLAN
PR	POINT
QA	QUALITY
RN	RANGE
RT	RATING
RF	REFERENCE NUMBER
SC	SCHEDULE
SB	SECTION
SL	SELECTION
SE	SERIES
SV	SERVICE
SX	SET
SA	SHADE
SH	SHAPE
SG	SHEET
SZ	SIZE

FIIG A159
APPENDIX A

<u>REPLY CODE</u>	<u>REPLY (AD08)</u>
PZ	SPECIES
SQ	SPECIFICATION SHEET
SD	SPEED
ST	STYLE
SS	SUBCLASS
SF	SUBFORM
SP	SUBTYPE
SN	SURFACE CONDITION
SY	SYMBOL
SM	SYSTEM
TB	TABLE
TN	TANNAGE
TP	TEMPER
TX	TEXTURE
TK	THICKNESS
TT	TREATMENT
TR	TRIM
TY	TYPE
YN	UNIT
VA	VARIETY
WT	WEIGHT
WD	WIDTH

Table 7 - HAZARDOUS LOCATIONS/ENVIRONMENTAL PROTECTION

<u>REPLY CODE</u>	<u>REPLY (AB27)</u>
AA	ACID RESISTANT
AB	CEMENT TIGHT (Sufficiently inclosed to prevent entry of wet cement)
FS	DRIPTIGHT
AC	DRIPTIGHT-NEMA TYPE 2
CF	DUSTPROOF
AD	DUSTPROOF-NEMA TYPE 13 (Impervious to Presence)
DY	DUSTTIGHT
AE	DUSTTIGHT-NEMA TYPE 5 (Prevents Entry)
CE	EXPLOSION PROOF
AF	EXPLOSION PROOF NEC CL. I, GP. ABCD; CL. II, GP. EFG; CL. III *
AH	EXPLOSION PROOF NEC CL. I, GP. BC; CL. II, GP. EFG; CL. III
AG	EXPLOSION PROOF NEC CL. I, GP. BCD; CL. II, GP. EFG; CL. III
AJ	EXPLOSION PROOF NEC CL. I, GP. CD; CL. II, GP. EFG; CL. III
AK	EXPLOSION PROOF NEC CL. I, GP. D; CL. II, GP. EFG; CL. III
AM	EXPLOSION PROOF NEC CL. I, GP. D; CL. II, GP. G
AL	EXPLOSION PROOF NEC CL. I, GP. D; CL. II, GP. EFG
AN	EXPLOSION PROOF NEC CL. II, GP. EFG; CL. III
AP	GENERAL PURPOSE-NEMA TYPE 1
CJ	OILTIGHT
AQ	OILTIGHT-NEMA TYPE 11

FIIG A159
APPENDIX A

<u>REPLY CODE</u>	<u>REPLY (AB27)</u>
EM	RAINTIGHT
AR	RAINTIGHT-NEMA TYPE 3R
GC	SALT SPRAY PROOF
CL	SPRAYTIGHT
DZ	SUBMERSIBLE
AS	SUBMERSIBLE-NEMA TYPE 6 **
AT	VAPORTIGHT, GASTIGHT
CN	WATERTIGHT
AU	WATERTIGHT-NEMA TYPE 4
DX	WEATHERPROOF
AV	WEATHERPROOF-NEMA TYPE 3 (Weather Resistant)

*National Electric Code

**National Electric Manufacturers Association

Refer to Appendix C, Table 6, NEC Article 500 for Explosion Proof Ratings.

Refer to Appendix C, Table 4 and 5 for NEMA definitions of terms and NEMA Ratings.

Reference Drawing Groups

REFERENCE DRAWING GROUP A.....	43
--------------------------------	----

REFERENCE DRAWING GROUP A

CONTACT ARRANGEMENTS

NONPILE-UP TYPE

The single and double throw schematics (Reply Codes AA through AQ) represent single pole items only. The reply for contact arrangement designation shall consist of the applicable reply code followed by the number of poles (e.g., for a double pole, single throw switch with both positions maintained, enter reply as "AKDYJAA2"; for a single pole, double throw switch with one position momentary, enter reply as "AKDYJAK1").

The schematics for the double pole with internal jumpers (Reply Code AR), the two circuit arrangements (Reply Codes AS through AZ) and the four throw arrangements (Reply Codes BA and BB), represent the basic form. The reply for contact arrangement designation shall consist of the applicable reply code followed by the number of basic forms (e.g., for a single two circuit switch with both positions maintained, enter reply as "AKDYJAS1"; for a switch consisting of two, two circuit with one position momentary, enter reply as "AKDYJAV2").

For switches identified only "three way" or "four way", enter Reply Code AH or BC;, respectively, followed by the numeral one (1) (e.g., "AKDYJAH1; AKDYJBC1").

For a multiple-unit type switch (defined as a grouping of individual separable switches which are electrically connected or physically interlocked to each other in which the movement of a single actuator from the center position actuates a switch or unit of switches in each direction of actuator travel), use secondary sequence coding. Give reply for 1st switch unit or group followed by the reply for the 2nd switch unit or group (see figure 1). For a multiple-unit switch where the switch units of groups cannot be located in accordance with figure 1, give replies in order of actuator positions. Do not give reply for the center actuator position.

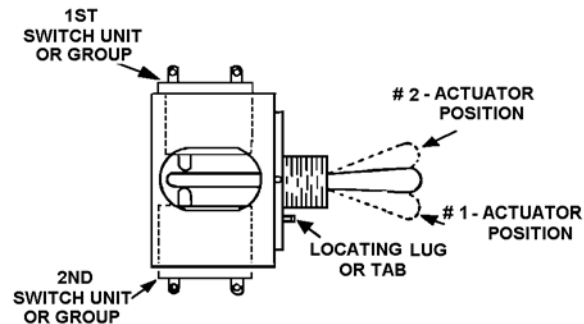


FIGURE 1 - ACTUATING POSITIONS

SYMBOL ○ INDICATES MAINTAINED CONTACT

SYMBOL △ INDICATES MOMENTARY CONTACT

FIG A159
APPENDIX B

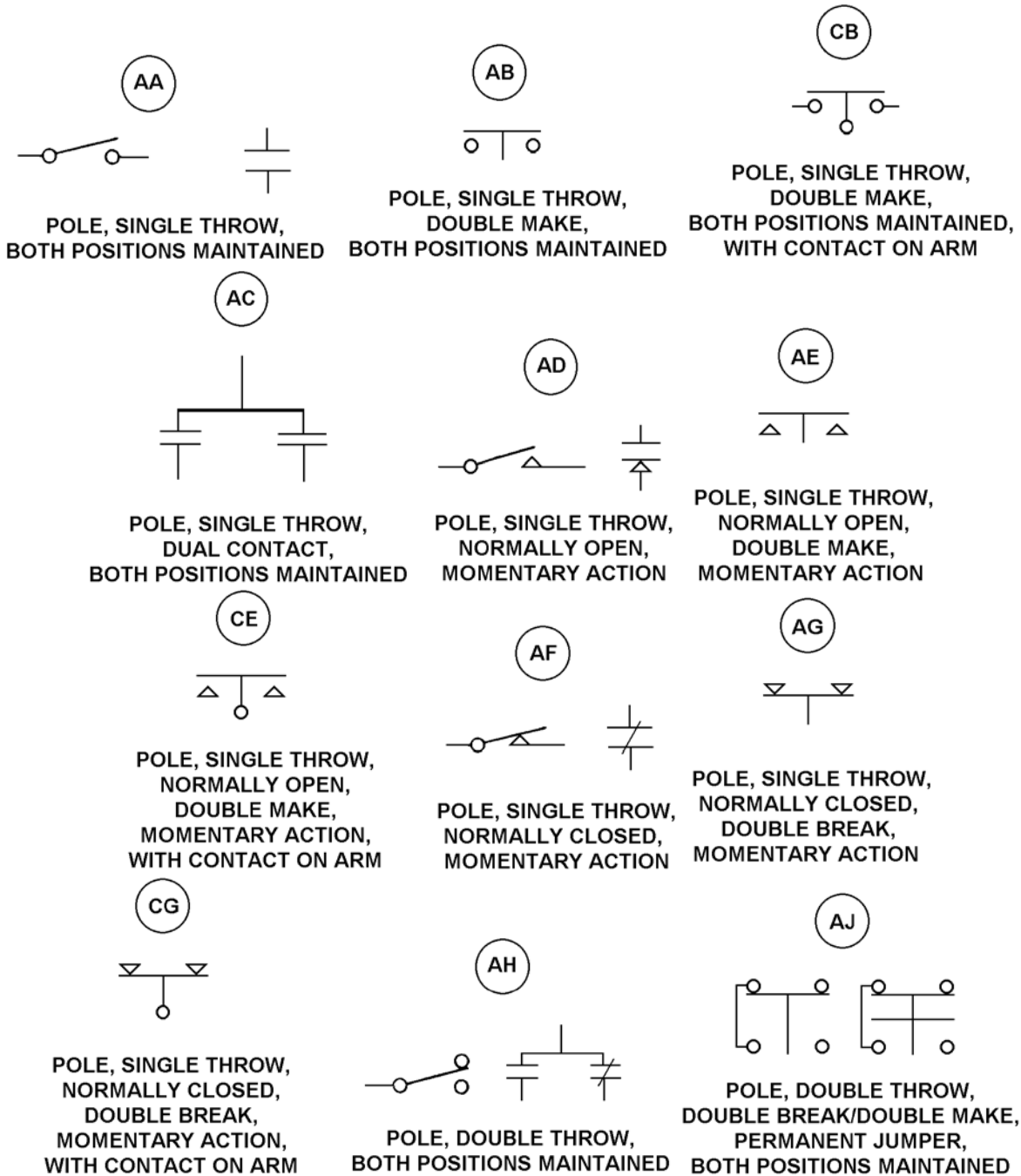


FIG A159
APPENDIX B

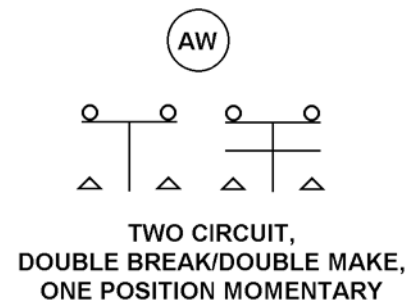
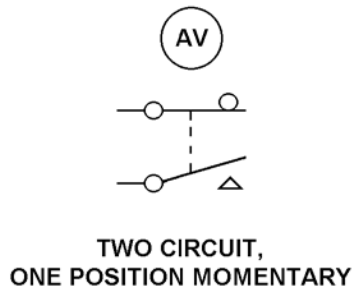
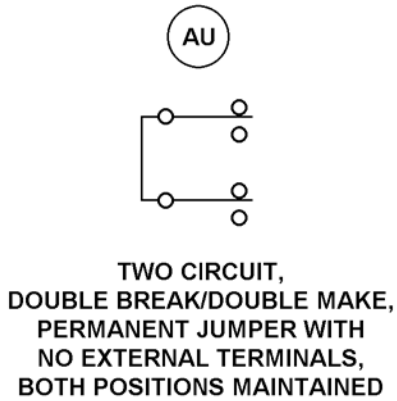
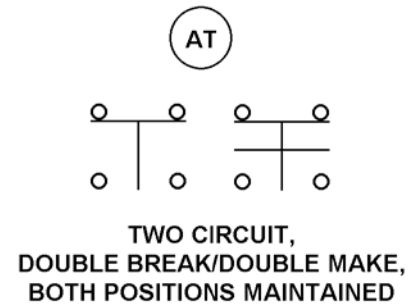
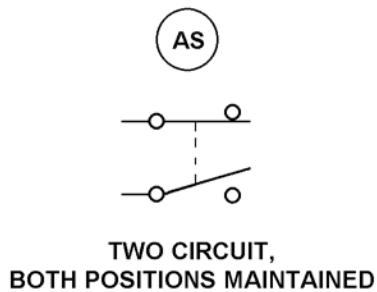
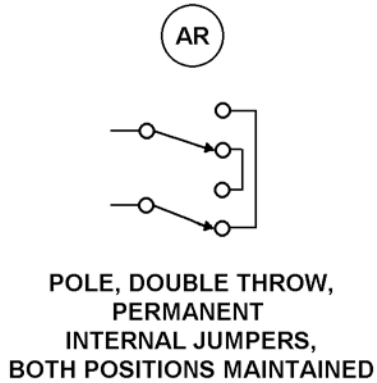
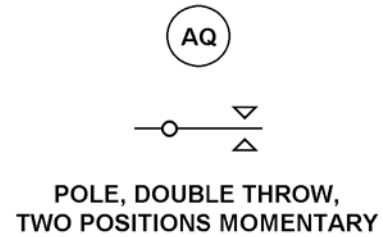
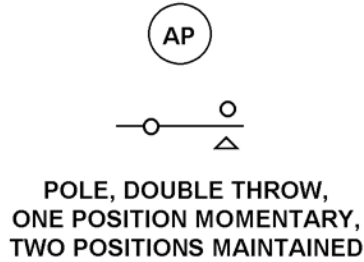
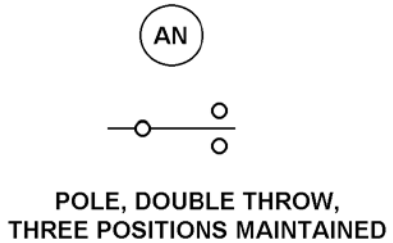
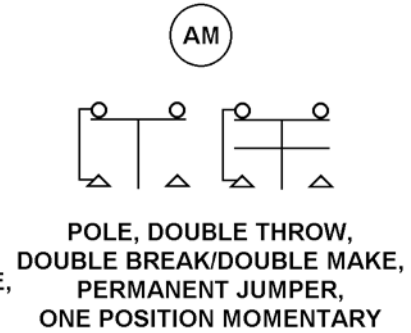
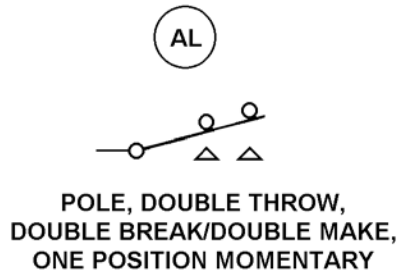
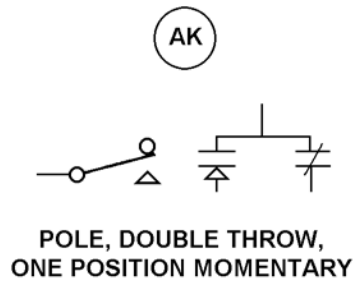
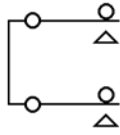


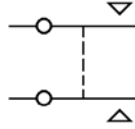
FIG A159
APPENDIX B

AX



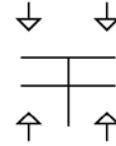
TWO CIRCUIT,
DOUBLE BREAK/DOUBLE MAKE,
PERMANENT JUMPER WITH
NO EXTERNAL TERMINALS,
ONE POSITION MOMENTARY

AY



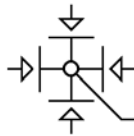
TWO CIRCUIT,
TWO POSITIONS MOMENTARY

AZ



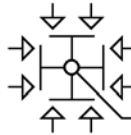
TWO CIRCUIT, DOUBLE MAKE,
TWO POSITIONS MOMENTARY

BA



FOUR THROW,
NORMALLY OPEN,
MOMENTARY ACTION

BB



FOUR THROW,
DOUBLE MAKE,
NORMALLY OPEN,
MOMENTARY ACTION

BC

FOUR WAY

Technical Data Tables

LAMP DATA	48
STANDARD FRACTION TO DECIMAL CONVERSION CHART	50
METRIC CONVERSION CHART	51
NEMA* DEFINITIONS OF QUALIFYING TERMS	52
NEMA* DESCRIPTIONS OF ELECTRICAL EQUIPMENT ENCLOSURES	53
HAZARDOUS LOCATION CLASSIFICATION	56
OUNCE TO DECIMAL OF A POUND CONVERSION CHART	57

FIIG A159
APPENDIX C

LAMP DATA

<u>LAMP NUMBER</u>	<u>LAMP BASE STYLE</u>	<u>LAMP BULB OUTLINE</u>
6S6	Candelabra Screw	S-6
12	Miniature 2 Pin	G-3 1/2
19	Miniature 2 Pin	G-3 1/2
40	Miniature Screw	T-3 1/4
44	Miniature Bayonet	T-3 1/4
46	Miniature Screw	T-3 1/4
47	Miniature Bayonet	T-3 1/4
51	Miniature Bayonet	G-3 1/2
52	Miniature Screw	G-3 1/2
53	Miniature Bayonet	G-3 1/2
158	Wedge	T-3 1/4
161	Wedge	T-3 1/4
259	Wedge	T-3 1/4
313	Miniature Bayonet	T-3 1/4
327	Midget Flange	T-1 3/4
328	Midget Flange	T-1 3/4
330	Midget Flange	T-1 3/4
334	Midget Groove	T-1 3/4
335	Midget Screw	T-1 3/4
337	Midget Groove	T-1 3/4
340	Midget Flange	T-1 3/4
342	Midget Screw	T-1 3/4
344	Midget Flange	T-1 3/4
345	Midget Flange	T-1 3/4
349	Midget Flange	T-1 3/4
350	Midget Flange	T-1 3/4
367	Midget Flange	T-1 3/4
382	Midget Flange	T-1 3/4
384	Midget Flange	T-1 3/4
387	Midget Flange	T-1 3/4
433	Miniature Bayonet	G-4 1/2
1768	Midget Screw	T-1 3/4
1775	Midget Screw	T-1 3/4
1815	Miniature Bayonet	T-3 1/4
1820	Miniature Bayonet	T-3 1/4
1829	Miniature Bayonet	T-3 1/4
1847	Miniature Bayonet	T-3 1/4
1891	Miniature Bayonet	T-3 1/4
1892	Miniature Bayonet	T-3 1/4
1893	Miniature Bayonet	T-3 1/4
1898	Miniature Bayonet	T-3 1/4

FIG A159
APPENDIX C

<u>LAMP NUMBER</u>	<u>LAMP BASE STYLE</u>	<u>LAMP BULB OUTLINE</u>
2310	Midget Groove	T-1 3/4

FIIG A159
APPENDIX C

STANDARD FRACTION TO DECIMAL CONVERSION CHART

<u>4ths</u>	<u>8ths</u>	<u>16ths</u>	<u>32nds</u>	<u>64ths</u>	<u>To 3</u>	<u>To 4</u>	<u>4ths</u>	<u>8ths</u>	<u>16ths</u>	<u>32nds</u>	<u>64ths</u>	<u>To 3</u>	<u>To 4</u>
				1/64	.016	.0156					33/64	.516	.5156
			1/32	-----	.031	.0312				17/32	-----	.531	.5312
				3/64	.047	.0469					35/64	.547	.5469
		1/16	-----		.062	.0625			9/16	-----	-----	.562	.5625
				5/64	.078	.0781					37/64	.578	.5781
			3/32	-----	.094	.0938				19/32	-----	.594	.5938
				7/64	.109	.1094					39/64	.609	.6094
	1/8	-----	-----	-----	.125	.1250		5/8	-----	-----	-----	.625	.6250
				9/64	.141	.1406					41/64	.641	.6406
			5/32	-----	.156	.1562				21/32	-----	.656	.6562
				11/64	.172	.1719					43/64	.672	.6719
		3/16	-----	-----	.188	.1875			11/16	-----	-----	.688	.6875
				13/64	.203	.2031					45/64	.703	.7031
			7/32	-----	.219	.2188				23/32	-----	.719	.7188
				15/64	.234	.2344					47/64	.734	.7344
1/4	-----	-----	-----	-----	.250	.2500	3/4	-----	-----	-----	-----	.750	.7500
				17/64	.266	.2656					49/64	.766	.7656
			9/32	-----	.281	.2812				25/32	-----	.781	.7812
				19/64	.297	.2969					51/64	.797	.7969
		5/16	-----	-----	.312	.3125			13/16	-----	-----	.812	.8125
				21/64	.328	.3281					53/64	.828	.8281
			11/32	-----	.344	.3438				27/32	-----	.844	.8438
				23/64	.359	.3594					55/64	.859	.8594
	3/8	-----	-----	-----	.375	.3750		7/8	-----	-----	-----	.875	.8750
				25/64	.391	.3906					57/64	.891	.8906
			13/32	-----	.406	.4062				29/32	-----	.906	.9062
				27/64	.422	.4219					59/64	.922	.9219
		7/16	-----	-----	.438	.4375			15/16	-----	-----	.938	.9375
				29/64	.453	.4531					61/64	.953	.9531
			15/32	-----	.469	.4688				31/32	-----	.969	.9688
				31/64	.484	.4844					63/64	.984	.9844
					.500	.5000						1.000	1.0000

FIIG A159
APPENDIX C

METRIC CONVERSION CHART

<u>ORIGI</u> <u>NAL</u> <u>VALU</u> <u>E</u>	<u>DESI</u> <u>RED</u> <u>VAL</u> <u>UE</u>																
<u>Prefix</u>		<u>Te</u> <u>ra</u>	<u>Gi</u> <u>ga</u>	<u>Me</u> <u>ga</u>	<u>My</u> <u>ria</u>	<u>Ki</u> <u>lo</u>	<u>He</u> <u>cto</u>	<u>De</u> <u>ke</u>	<u>*U</u> <u>nit</u>	<u>De</u> <u>ci</u>	<u>Ce</u> <u>nti</u>	<u>Mi</u> <u>lli</u>	<u>Mi</u> <u>cro</u>	<u>Na</u> <u>no</u>	<u>Pic</u> <u>o</u>	<u>Fe</u> <u>mta</u>	<u>Att</u> <u>o</u>
	<u>Power</u> <u>of 10</u>	<u>10</u> <u>12</u>	<u>10</u> <u>9</u>	<u>10</u> <u>6</u>	<u>104</u>	<u>10</u> <u>3</u>	<u>102</u>	<u>10</u> <u>1</u>	<u>10</u> <u>0</u>	<u>10-</u> <u>1</u>	<u>10-</u> <u>2</u>	<u>10-</u> <u>3</u>	<u>10-</u> <u>6</u>	<u>10-</u> <u>9</u>	<u>12-</u> <u>12</u>	<u>10-</u> <u>15</u>	<u>10-</u> <u>18</u>
Tera	1012		3 a d	6 a d	8 a d	9 a d	10 ad	11 ad	12 ad	13 ad	14 ad	15 ad	18 ad	21 ad	24 ad	27 ad	30 ad
Giga	109	aj 3		3 a d	5 a d	6 a d	7 a d	8 a d	9 a d	10 ad	11 ad	12 ad	15 ad	18 ad	21 ad	24 ad	27 ad
Mega	106	aj 6	aj 3		2 a d	3 a d	4 a d	5 a d	6 a d	7 a d	8 a d	9 a d	12 ad	15 ad	18 ad	21 ad	24 ad
Myria	104	aj 8	aj 5	aj2		1 a d	2 a d	3 a d	4 a d	5 a d	6 a d	7 a d	10 ad	13 ad	16 ad	19 ad	22 ad
Kilo	103	aj 9	aj 6	aj3	aj1		1 a d	2 a d	3 a d	4 a d	5 a d	6 a d	9 a d	12 ad	15 ad	18 ad	21 ad
Hecto	102	aj 10	aj 7	aj4	aj2	aj 1		1 a d	2 a d	3 a d	4 a d	5 a d	8 a d	11 ad	14 ad	17 ad	20 ad
Deka	101	aj 11	aj 8	aj5	aj3	aj 2	aj1		1 a d	2 a d	3 a d	4 a d	7 a d	10 ad	13 ad	16 ad	19 ad
*Unit	100	aj 12	aj 9	aj6	aj4	aj 3	aj2	aj 1		1 a d	2 a d	3 a d	6 a d	9 a d	12 ad	15 ad	18 ad
Deci	10-1	aj 13	aj 10	aj7	aj5	aj 4	aj3	aj 2	aj1		1 a d	2 a d	5 a d	8 a d	11 ad	14 ad	17 ad
Centi	10-2	aj 14	aj 11	aj8	aj6	aj 5	aj4	aj 3	aj2	aj 1		1 a d	4 a d	7 a d	10 ad	13 ad	16 ad
Milli	10-3	aj 15	aj 12	aj9	aj7	aj 6	aj5	aj 4	aj3	aj 2	aj 1		3 a d	6 a d	9 a d	12 ad	15 ad
Micro	10-6	aj 18	aj 15	aj1 2	aj1 0	aj 9	aj8	aj 7	aj6	aj 5	aj 4	aj 3		3 a d	6 a d	9 a d	12 ad
Nano	10-9	aj 21	aj 18	aj1 5	aj1 3	aj 12	aj1 1	aj 10	aj9	aj 8	aj 7	aj 6	aj3		3 a d	6 a d	9 a d
Pico	10-12	aj 24	aj 21	aj1 8	aj1 6	aj 15	aj1 4	aj 13	aj1 2	aj 11	aj 10	aj 9	aj6	aj 3		3 a d	6 a d
Femto	10-15	aj 27	aj 24	aj2 1	aj1 9	aj 18	aj1 7	aj 16	aj1 5	aj 14	aj 13	aj 12	aj9	aj 6	aj 3		3 a d
Atto	10-18	aj 30	aj 27	aj2 4	aj2 2	aj 21	aj2 0	aj 19	aj1 8	aj 17	aj 16	aj 15	aj1 2	aj 9	aj 6	aj3	

* The notation "unit" represents the basic unit of measurement, such as amperes, farads, grams, hertz, meters, ohms, volts, watts, etc.

To convert from one notation (metric or a power of ten) to another, locate the original or given value in the left-hand column. Follow this line horizontally to the vertical column headed by the desired notation. The figure and arrow at the intersection of these two columns indicates the direction and number of places the decimal point is to be moved (e.g., to convert 25,000 kilohertz to megahertz, at the intersection of the horizontal column for kilo and the vertical column for mega find the figure and directional arrow 3. Thus, shifting the decimal in 25,000 kilohertz 3 places to the left results in the value of 25 megahertz).

NEMA* DEFINITIONS OF QUALIFYING TERMS

NOTE: Definitions in the above list bearing the identification "C42" are selected from the group 95 definitions proposed by subcommittee 18 of sectional committee C42 for inclusion in the next edition of the "American Standard Definitions of Electrical Terms." Numbers at right of each definition refer to "American Standard Definitions of Electrical Terms," published by American Institute of Electrical Engineers, approved by **American Standards Association. *National Electrical Manufacturers Association **Now American National Standards Institute (ANSI)

1. Acid-Resistant (C42) 95.91.165 Acid-resistant means so constructed that it will not be injured readily by exposure to acid fumes.

2. Dustproof (C42) 95.91.126 Dustproof means so constructed or protected that dust will not interfere with its successful operation.

3. Dust-tight (C42) 95.91.130 Dust-tight means so constructed that dust will not enter the enclosing case.

4. Fume-resistant (C42) 95.91.116 Fume-resistant means so constructed that it will not be injured readily by exposure to the specified fumes.

5. Moisture resistant (C42) 95.91.140Moisture-resistant means so constructed or treated that it will not be injured readily by exposure to a moist atmosphere.

6. Oil-tight Oil-tight means so constructed that oil will not enter the enclosing case.

7. Rain-tight (C42) 95.91.175Rain-tight means so constructed or protected that exposure to a beating rain will not result in the entrance of water.

8. Sleetproof (C42) 95.91.170Sleetproof means so constructed or protected that the accumulation of sleet will not interfere with its successful operations.

9. Splashproof (C42) 95.91.160Splashproof means so constructed and protected that external splashing will not interfere with its successful operation.

10. Submersible (C42) 95.91.148Submersible means so constructed that it will operate successfully when submerged in water under specified conditions of pressure and time.

11. Water-tight Water-tight means provided with an enclosing case which will exclude water applied in the form of a hose stream under specified conditions.

12. Weatherproof (Outside Exposure) (C42) 95.91.186Weatherproof means so constructed or protected that exposure to the weather will not interfere with its successful operation.

*National Electrical Manufacturers Association

**Now American National Standards Institute (ANSI)

NEMA* DESCRIPTIONS OF ELECTRICAL EQUIPMENT ENCLOSURES

ENCLOSURE TYPES ARE AS FOLLOWS:

Type 1 - General Purpose A general purpose enclosure is intended primarily to prevent accidental contact with the enclosed apparatus. It is suitable for general-purpose applications indoors where it is not exposed to unusual service conditions.

Type 2 - Drip-Tight A drip-tight enclosure is intended primarily to prevent accidental contact with the enclosed apparatus and, in addition, is so constructed as to exclude falling moisture or dirt.

Type 3 - Weatherproof (Weather-Resistant) A weatherproof enclosure is intended to provide suitable protection against specified weather hazards. It is suitable for use outdoors.

Type 3R - Raintight A raintight enclosure is intended primarily to meet the requirements for raintight (definition No. 7 of appended list) apparatus. It is suitable for general applications outdoors where sleet-proof construction is not required.

Type 4 - Watertight A watertight enclosure is designed to exclude water applied in the form of a hose stream (ASA C42-1941, 95.90.145)*. It is suitable for application where the apparatus may be subjected to a stream of water during cleaning operations and the like.

*Where a section has adopted its own test description, it may be substituted for the ASA identification.

Type 5 - Dust-Tight A dust-tight enclosure is so constructed as to exclude dust.

Type 6 - Submersible A submersible enclosure is intended to permit the enclosed apparatus to operate successfully when submerged in water under specified conditions of pressure and time.

Type 7 (A, B, C, or D)*Hazardous Locations Class I--Air Break These enclosures are designed to meet the application requirements of the National Electrical Code for Class I Hazardous locations which may be in effect from time to time. In this type of equipment, the circuit interruption occurs in air.

*The letter or letters following the type number indicates the particular group or groups of hazardous locations (as defined in the National Electrical Code) for which the enclosure is designed. The type designation is incomplete without a suffix letter or letters.

Type 8 (A, B, C, or D)*Hazardous Locations Class I--Oil Immersed These enclosures are designed to meet the application requirements of the National Electrical Code for Class I Hazardous Locations which may be in effect from time to time. The apparatus is immersed in oil.

*The letter or letters following the type number indicates the particular group or groups of hazardous locations (as defined in the National Electrical Code) for which the enclosure is designed. The type designation is incomplete without a suffix letter or letters.

Type 9 (E, F, or G)*Hazardous Locations, Class II These enclosures are designed to meet the application requirements of the National Electrical Code for Class II Hazardous Locations which may be in effect from time to time.

*The letter or letters following the type number indicates the particular group or groups of hazardous locations (as defined in the National Electrical Code) for which the enclosure is designed. The designation is incomplete without a suffix letter or letters.

Type 10 - Bureau of Mines--Explosion-proof This enclosure is designed to meet the explosion-proof requirements of the U.S. Bureau of Mines which may be in effect from time to time. It is suitable for use in gassy coal mines.

Type 11 - Acid or Fume-Resistant--Oil Immersed This enclosure provides for the immersion of the apparatus in oil such that it is suitable for application where the equipment is subject to acid or other corrosive fumes.

Type 12 - Industrial Use An industrial use enclosure is designed for use in those industries where it is desired to exclude such materials as dust, lint, fibers and flyings, oil seepage or coolant seepage.

Type 13 - Dust-Proof A dust-proof enclosure is intended primarily to prevent accidental contact with the enclosed apparatus and, in addition, is so constructed that dust which may enter will not interfere with the operation of the apparatus. The construction of the enclosure can be defined only in relation to the apparatus and to the amount and kind of dust present.

*National Electrical Manufacturers Association

HAZARDOUS LOCATION CLASSIFICATION

CLASS I - LOCATIONS

"Class I locations are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures." Class I includes the following groups:

GROUP A:

Atmospheres containing acetylene;

GROUP B:

Atmospheres containing hydrogen or gases or vapors of equivalent hazard such as manufactured gas;

GROUP C:

Atmospheres containing ethyl-ether vapor, ethylene, or cyclopropane;

GROUP D:

Atmospheres containing gasoline, hexane, naptha, benzine, butane, propane, alcohol, acetone, lacquer solvent vapors, or natural gas.

CLASS II - LOCATIONS

"Class II locations are those which are hazardous because of the presence of combustible dust." Class II locations include the following groups:

GROUP E:

Atmospheres containing metal dust, including aluminum, magnesium, and their commercial alloys;

GROUP F:

Atmospheres containing carbon black, coal or coke dust;

GROUP G:

Atmospheres containing flour, starch, or grain dust.

CLASS III - LOCATIONS

"Class III locations are those which are hazardous because of the

FIIG A159
APPENDIX C

presence of easily ignitable fibers or flyings; but in which such fibers or flyings are not likely to be in suspension in air in quantities sufficient to produce ignitable mixtures."

OUNCE TO DECIMAL OF A POUND CONVERSION CHART

<u>OUNCES</u>	<u>POUNDS</u>
1	0.062
2	0.125
3	0.188
4	0.250
5	0.312
6	0.375
7	0.438
8	0.500
9	0.562
10	0.625
11	0.688
12	0.750
13	0.812
14	0.875
15	0.938
16	1.000

FIIG Change List

FIIG Change List, Effective August 7, 2009

Remove Secondary Address Coding from MRC's ANNR and ANNQ.